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President, Diabetes Education Services

## Diabetes, Vascular Disease and the Pathway of Insulin Resistance

www.DiabetesEd.net



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### Objectives



- ▶ Describe the impact of insulin resistance and hyperglycemia on vessel disease.
- ▶ State the factors and complications associated with vascular disease.
- ▶ List management goals to reduce risk of vascular disease.
- ▶ Discuss strategies to promote health.



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### Resources and Sources

CV Disease and Diabetes Webinar 2018 [Link](#)

Heart Disease and Diabetes Powerpoint Handout

Cardiovascular Disease Management: American Diabetes Association Standard of Care – Jan 2018

AACE 2018 Diabetes Management Algorithm Slide Summary

AACE Diabetes Algorithm Executive Summary 2018

Cholesterol Medications 2016

AntiHypertensive Meds 2016

Exercise Resources

Lower Extremity Information

Plant Based Eating Resources



#### 9. Cardiovascular Disease and Risk Management: *Standards of Medical Care in Diabetes—2018*

American Diabetes Association  
Diabetes Care 2018 Jan; 41(Supplement 1): S86-S104.  
<https://doi.org/10.2337/dc18-S009>



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## Diabetes in America 2018

- ▶ 30.3 million or > 9.4%
  - ▶ 27% don't know they have it
- ▶ 37% of US adults have pre diabetes (86 mil)
- ▶ Increasing rates 3 key factors
  - ▶ Aging of U.S. Population
  - ▶ Increasing size of higher-risk minority populations
  - ▶ Declining mortality among those with diabetes



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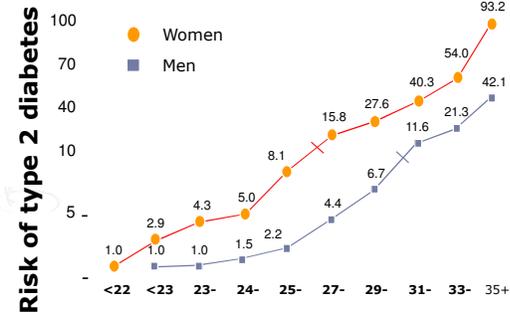
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## The relationship between BMI and the risk of developing type 2 diabetes



Body mass index (kg/m<sup>2</sup>)

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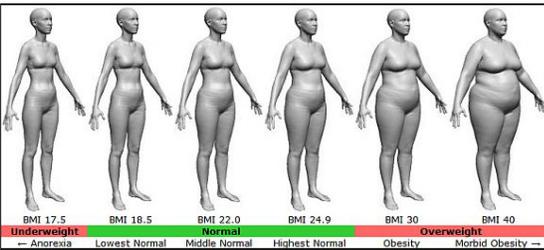
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## BMI – Visual Image



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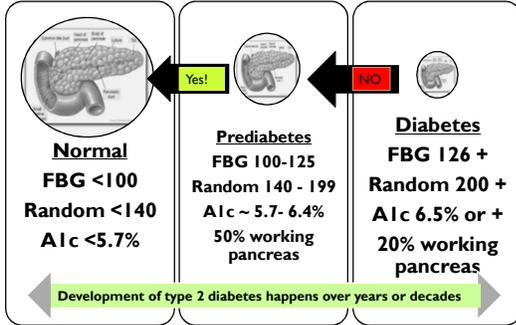
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## Natural History of Diabetes




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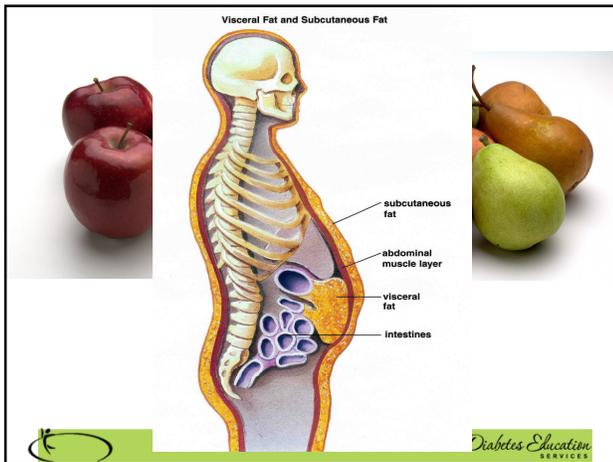
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## Poll question 1

- Which of the following BEST describes insulin resistance?
- Lack of sufficient insulin receptors on fat and muscle cells.
  - Visceral adipose tissue.
  - A physiological condition where insulin becomes less effective at lowering blood glucose levels.
  - Excessive triglyceride levels




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## Insulin Resistance is the Seed

- ▶ Muscles are insulin resistant
  - ▶ Building muscle decreases insulin resistant
- ▶ Fat cells become more insulin resistant
  - ▶ Leads to more Free Fatty Acids and Triglycerides
  - ▶ More vascular inflammation
- ▶ Pancreas becomes fatty
  - ▶ Losing wt helps improve



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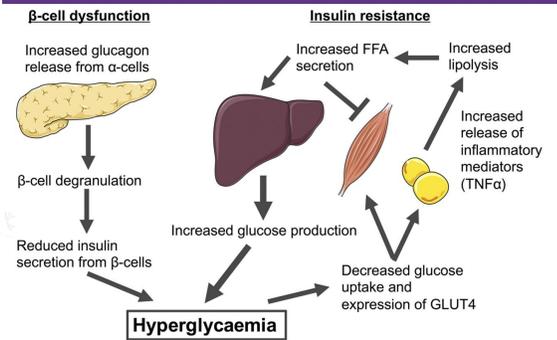
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## Insulin Resistance



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## Vascular Disease & Diabetes "atherosclerosis"

- Normal endothelial cells are protective
- Abnormal glucose = Endothelial cell dysfunction
  - Ⓜ Lower Nitric Oxide levels = Poor vasodilation
  - Ⓜ Release of inflammatory mediators
  - Ⓜ Higher aldosterone levels > angiotensin = HTN
  - Ⓜ Adipokines from visceral fat increase inflammation
  - Ⓜ Increased risk of acute thrombotic event
- Increased arterial stiffness
  - Due to chronic hyperglycemia, endothelial inflammation

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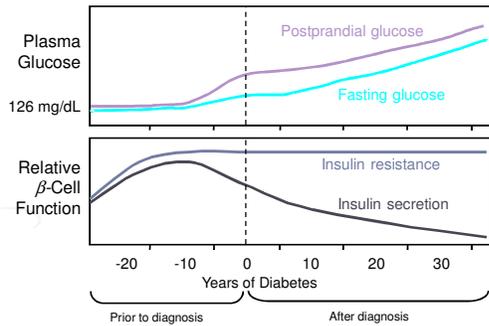
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## Natural Progression of Type 2 Diabetes



Adapted from Bergenstal et al. 2000; International Diabetes Center.

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## Poll question 2

- ▶ Which of the following Cardiovascular Conditions are associated with diabetes?
  - A. Congestive Heart Failure
  - B. Hypervasodilation
  - C. Acanthosis Nigricans
  - D. CardioNephritis



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## Heart Disease & DM = 3-5xs Risk

- ▶ CHF
  - ▶ 7.9 % w/ diabetes vs.
  - ▶ 1.1 % no diabetes
- ▶ Heart attack
  - ▶ 9.8 % w/ diabetes vs.
  - ▶ 1.8 % no diabetes
- ▶ Coronary heart disease
  - ▶ 9.1 % w/ diabetes vs.
  - ▶ 2.1 % no diabetes
- ▶ Stroke
  - ▶ 6.6 % w/ diabetes vs.
  - ▶ 1.8 % no diabetes



▶ 2007 AACE

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*Acanthosis Nigricans*

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### Acanthosis Nigricans (AN)

- ▶ Signals high insulin levels in bloodstream and is a marker of insulin resistance
- ▶ Patches of darkened skin over parts of body that bend or rub against each other
  - ▶ Neck, underarm, waistline, groin, knuckles, elbows, toes
  - ▶ Skin tags on neck and darkened areas around eyes, nose and cheeks.
- ▶ No cure, lesions regress with treatment of insulin resistance

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### Weight loss, Prevention and CVD

- ▶ PreDiabetes = increased CVD risk
- ▶ For every 2.2 pounds of weight loss, risk of type 2 diabetes was reduced by 13%.



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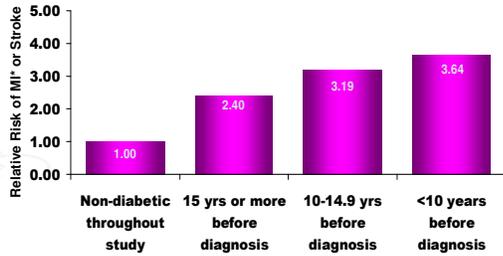
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## Risk of CVD Is Elevated prior to Diagnosis of Type 2 Diabetes



Adapted from: Hu F, et al. *Diabetes Care*. 2002;25:1129-1134.

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## Factors Associated with Insulin Resistance

- ▶ Abdominal obesity
- ▶ Sedentary lifestyle
- ▶ Genetics / Ethnicity
- ▶ Gestational Diabetes
- ▶ Polycystic ovary syndrome
- ▶ Acanthosis Nigricans
- ▶ Obstructive Sleep Apnea
- ▶ Cancer



American College of Endocrinology 2001

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## Cardio Metabolic Risk - 5 Hypers -

- ▶ Hyperinsulinemia (resistance)
- ▶ Hyperglycemia
- ▶ Hyperlipidemia
- ▶ Hypertension
- ▶ Hyper"waistline"emia (35" women, 40" men)



*Manifestations of Insulin Resistance*

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### Poll question 3

- ▶ What is the current B/P goal for people with diabetes.
- ▶ A. 130/80
- ▶ B. 140/80
- ▶ C. 120/70
- ▶ D. 140/90



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### Start Metformin therapy

- ▶ For women with PreDiabetes and History of GDM
- ▶ Metformin reduces risk of diabetes
- ▶ Metformin helps decrease CV Risk



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**Patti LaBelle**  
"divabetic"  
"I have diabetes, it doesn't have me"

"I don't want diabetes to steal one more life."  
- Patti LaBelle

Join Patti LaBelle to Stop Diabetes@

Donate now and give hope

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## Diabetes is also associated with:

- ▶ Alzheimer's
- ▶ Depression
- ▶ DM and Insulin Resistance Associated with:
  - ▶ Fatty liver disease
  - ▶ Obstructive sleep apnea
  - ▶ Cancer; pancreas, liver, breast
  - ▶ Cardiovascular disease



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## Cardiovascular Disease is the Leading Cause of Death – CV Management Goals



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## Poll question 4

- ▶ What is the relationship between diabetes and cardiovascular disease?
  - A. Diabetes is associated with a lower rate of congestive heart failure.
  - B. Diabetes is associated with decreased incidence of heart attack and stroke
  - C. People with diabetes are destined to get CV complications.
  - D. People with diabetes can decrease their risk of a CV event through medications and lifestyle changes



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## Cardiovascular Disease and Risk Management

- ▶ Cardiovascular disease is the leading cause of mortality and morbidity in diabetes
- ▶ Largest contributor to direct and indirect costs
- ▶ Controlling cardiovascular risk improves outcomes
- ▶ Large benefits are seen when multiple risk factors are addressed globally



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## “Legacy Effect”

- ▶ For participants of DCCT and UKPDS
  - ▶ long lasting benefit of early intensive BG control prevents
    - ▶ Macrovascular complications
      - 42% reduction in CV disease
      - 57% reduction in nonfatal MI, Stroke or CVD death
    - ▶ Microvascular complications
    - ▶ Even though their BG levels increased over time
  - ▶ Message – Catch early and Treat aggressively



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## A 78 yr old man, smokes ppp

- ▶ A1c was 8.1%, swollen gums
- ▶ B/P 136/76 AM BG 100, 2 hr pp 190
- ▶ Chol – TG 54, HDL 46, LDL 98
- ▶ Meds:
  - ▶ Insulin – 16 units Lantus at HS
  - ▶ Benazepril 20 mg
  - ▶ Metoprolol 50mg
  - ▶ Warfarin 5mg
  - ▶ Actos 15 mg



What class of meds is this patient on?  
Any special instructions?  
Any med missing?  
He complains of foot pain



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## Vascular Risk Factors



- ▶ Nonmodifiable
  - ▶ Duration of diabetes – longer = more risk
  - ▶ Age – older increased risk
  - ▶ Gender – women have more CV protection pre-menopause
  - ▶ Race – risk varies
  - ▶ Genetics – family history

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## Vascular Risk Factors

- ▶ Modifiable
  - ▶ Blood Pressure
  - ▶ Lipids
  - ▶ Smoking
  - ▶ Obesity
  - ▶ Dietary Habits
  - ▶ Other factors – lack of exercise, Type A personality




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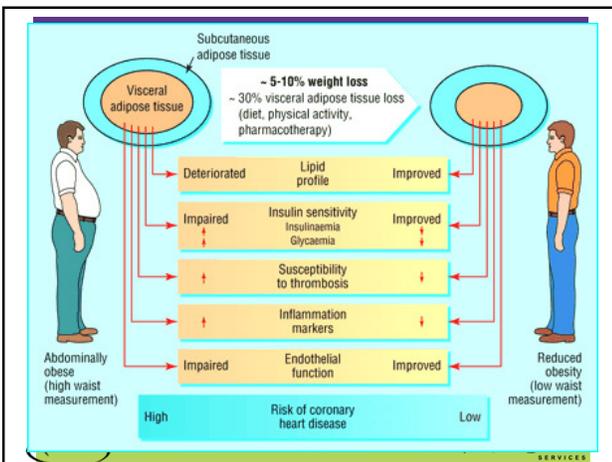
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## Poll Question 5

▶ Which of the following is the best recommendation to protect cardiovascular health?



- A. Avoid all fast foods
- B. Stop smoking
- C. Keep B/P as low as possible
- D. Eliminate sugar from diet



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## Smoking and Diabetes

**Smoking increases risk of diabetes 30%**



- Ask at every visit
- Assess
- Advise
- Assist with stop smoking
- Arrange for referrals
- Organize your clinic



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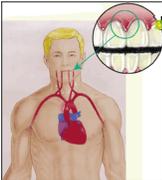
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## Periodontal disease and Heart Disease



Heart disease link:

- oral bacteria enter the blood stream, attach to fatty plaques in coronary arteries increasing clot formation
- inflammation increases plaque build up, which may contribute to arterial inflammation
- Hyperglycemia = Gingivitis = Heart Disease



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## Cardiovascular Disease and Risk Management

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## Diabetes & Heart Disease Motivational Stats

- ▶ Every 18 mg/dl increase in fasting glucose increases risk of CV events/death by 17%
- ▶ Every 1% increase in A1c increased:
  - ▶ CVD events by 18%
  - ▶ MI events by 19%
  - ▶ All cause mortality by 12-14%
  - ▶ Microvascular disease by 35%




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## Lifestyle Therapy

RISK STRATIFICATION FOR DIABETES COMPLICATIONS



INTENSITY STRATIFIED BY BURDEN OF OBESITY AND RELATED COMPLICATIONS

<b>Nutrition</b>	<ul style="list-style-type: none"> <li>Maintain optimal weight</li> <li>Calorie restriction (if BMI is increased)</li> <li>Plant-based diet; high polyunsaturated and monounsaturated fatty acids</li> </ul>	+	<ul style="list-style-type: none"> <li>Avoid trans fatty acids; limit saturated fatty acids</li> </ul>	+	<ul style="list-style-type: none"> <li>Structured counseling</li> <li>Meal replacement</li> </ul>
<b>Physical Activity</b>	<ul style="list-style-type: none"> <li>150 min/week moderate exertion (eg. walking, stair climbing)</li> <li>Strength training</li> <li>Increase as tolerated</li> </ul>	+	<ul style="list-style-type: none"> <li>Structured program</li> <li>Wearable technologies</li> </ul>	+	<ul style="list-style-type: none"> <li>Medical evaluation/clearance</li> <li>Medical supervision</li> </ul>
<b>Sleep</b>	<ul style="list-style-type: none"> <li>About 7 hours per night</li> <li>Basic sleep hygiene</li> </ul>	+	<ul style="list-style-type: none"> <li>Screen OSA</li> <li>Home sleep study</li> </ul>	+	<ul style="list-style-type: none"> <li>Referral to sleep lab</li> </ul>
<b>Behavioral Support</b>	<ul style="list-style-type: none"> <li>Community engagement</li> <li>Alcohol moderation</li> </ul>	+	<ul style="list-style-type: none"> <li>Discuss mood with HCP</li> </ul>	+	<ul style="list-style-type: none"> <li>Formal behavioral therapy</li> </ul>
<b>Smoking Cessation</b>	<ul style="list-style-type: none"> <li>No tobacco products</li> </ul>	+	<ul style="list-style-type: none"> <li>Nicotine replacement therapy</li> </ul>	+	<ul style="list-style-type: none"> <li>Referral to structured program</li> </ul>

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## Gastric Bypass Surgery

- ▶ 35% of people with diabetes overweight
- ▶ 35% of people with diabetes obese (BMI 35+)
- ▶ Treatment Options limited
  - ▶ Post Gastric bypass diabetes remission\* rates
    - ▶ 72% at 2 years
    - ▶ 36% at 10 years
  - ▶ Gastric bypass seems to support a lower CVD event rate and all cause mortality



ADA Stds \*Remission = BG normal range w/out meds



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## Poll Question 6

- ▶ The 2018 ADA Standards of Care include updates to the Cardiovascular Disease and risk management section. Which of the following accurately reflects updates to this section?
  - All hypertensive patients with diabetes should monitor home blood pressure.
  - All patients with type 1 diabetes should be started on an ACE Inhibitor.
  - Beta blockers should be avoided for all patients on insulin therapy
  - Start patients on combo of ACE + ARB if patient has resistant hypertension



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## CV Disease Management



- ▶ The ADA maintains B/P target of 140/90, based on comprehensive review of studies (including ACCORD BP trial findings)
- ▶ Current ADA Recommendations are as follows:
  - ▶ Hypertension, sustained blood pressure  $\geq 140/90$  is major risk factor CV and microvascular complications.
  - ▶ B/P meds & therapy reduce CV events, heart failure, and microvascular complications.
- ▶ Screening and Diagnosis Recommendations
  - ▶ Measure B/P at every routine clinical visit.
  - ▶ If B/P ( $\geq 140/90$ ) confirm B/P using multiple readings, including measurements on a separate day, to diagnose HTN
- ▶ All hypertensive patients with diabetes should monitor their blood pressure at home.



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**BP Goal**

**BP < 140 / 90**

- ▶ Some pts may benefit from B/P 130/80 (younger and achieved with undue tx burden)
- ▶ Pregnancy targets for those w/ hypertension 120-160 / 80-105

**Choosing the correct blood pressure cuff size**  
 Measure the circumference of your upper arm with a cloth measuring tape midway between the elbow and shoulder. Choose a cuff size that includes this measurement.

**Position for taking your blood pressure at home**

- 1 Rest for 5 minutes before measuring your blood pressure.
- 2 Sit in a chair with both feet flat on the ground and back straight.
- 3 Place your arm at the level of your heart or chest.
- 4 Stay still and do not talk as your blood pressure machine operates.

Measure your blood pressure in the morning right after you wake up or in the evening before you go to bed. Try to measure your blood pressure at the same time every day.




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**Hypertension Guidelines**

Screening – Check BP at each visit.

If either

- systolic 140 or >
- diastolic 90 or > repeat on separate day.

Hypertension = Repeat systolic or diastolic above or equal to these levels

When taking B/P

- Pt sit still for 5 min's
- Feet on floor,
- Arm supported at heart level
- Right size cuff





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**BP Treatment in addition to Lifestyle**

- ▶ First Line B/P Drugs
- ▶ If B/P ≥ 160 /100 start 2 drug combo
  - ▶ Any of the 4 classes of BP meds can be use to tx hypertension (without albuminuria).
  - ▶ This includes ACE Inhibitors, ARBs, thiazide-like diuretics or calcium channel blockers. (Avoid ACE and ARB at same time)
  - ▶ Multiple Drug Therapy often required
- ▶ For best effect, administer at least one at bedtime





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## Statin Therapy

- ▶ High intensity statins (lowers LDL 50%):
  - ▶ Lipitor (atorvastatin) 40-80mg
  - ▶ Crestor (rosuvastatin) 20-40mg
- ▶ Moderate intensity (lowers LDL 30-50%)
  - ▶ Lipitor (atorvastatin) 10-20mg
  - ▶ Crestor (rosuvastatin) 5-10mg
  - ▶ Zocor (Simvastatin) 20-40mg
  - ▶ Pravachol (pravastatin) 40 – 80mg
  - ▶ Mevacor (lovastatin) 40 mg
  - ▶ Lescol (fluvastatin) XL 80mg
  - ▶ Livalo (pitavastatin) 2-4mg



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## Dyslipidemia Management

- ▶ Intensify lifestyle therapy and optimize glucose control for patients with:
  - ▶ Triglycerides  $\geq 150$  and/or
  - ▶ HDL  $\leq 40$  (men)  $\leq 50$  (women)



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## Ongoing Therapy and Monitoring With Lipid Panel Recommendations

- ▶ In adults not taking statins or other lipid-lowering therapy, obtain a lipid profile at:
  - ▶ initial medical evaluation
  - ▶ every 5 years thereafter if  $< 40$  years, or more frequently if indicated.
- ▶ Obtain a lipid profile at initiation of statins or other lipid-lowering therapy
  - ▶ 4–12 weeks after dose change and
  - ▶ annually to monitor the response to therapy and inform adherence.



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## Antiplatelet Agents

- ▶ Consider aspirin therapy (71-162 mg/day)
- ▶ In pts who can't tolerate, use Plavix, (clopidogrel)
- ▶ Combo therapy of aspirin + clopidogrel is reasonable for a year after MI
- ▶ As a primary prevention strategy for T1 or T2 at increased CV risk (10 yr risk >10%)
- ▶ Includes most men or women w DM age ≥ 50 years, with at least 1 additional risk factor:
  - ▶ Family history of premature ASCVD
  - ▶ Hypertension
  - ▶ Smoking
  - ▶ Dyslipidemia
  - ▶ Albuminuria



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## Coronary Heart Disease

- ▶ In pts with known CVD, use:
  - ▶ Aspirin or Clopidogrel (Plavix)
  - ▶ Statin
  - ▶ B/P Med
    - ▶ In pts with prior MI, Beta Blockers should be continued at least 2 years after the event
  - ▶ Don't use Actos or Avandia in pts with CHF
  - ▶ In pts with stable CHF, Metformin can be used in renal function normal and stable



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## A 78 yr old man, smokes ppd

- ▶ A1c 8.1%, slurred speech
- ▶ B/P 136/76 AM BG 100, 2 hr pp 190
- ▶ Chol – TG 54, HDL 46, LDL 98
- ▶ Meds:
  - ▶ Insulin – 16 units Lantus at HS
  - ▶ Benazepril 20 mg
  - ▶ Metoprolol 50mg
  - ▶ Actos 15 mg
  - ▶ Daily aspirin



What class of meds is this patient on?  
Any special instructions?  
Any med missing?

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## Quick Question 7

- ▶ 78 year old, A1c 8.1, LDL 98, smokes ppd. Based on ADA guidelines, what med is missing?
- a. Sulfonylurea
- b. Vitamin D
- c. SGLT2 Inhibitor
- d. Statin



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## SPOT A STROKE



### Stroke Warning Signs and Symptoms

F.A.S.T. is an easy way to remember the sudden signs of stroke. When you can spot the signs, you'll know that you need to call 9-1-1 for help right away. F.A.S.T. is:

**F**ace Drooping – Does one side of the face droop or is it numb? Ask the person to smile. Is the person's smile uneven?

**A**rm Weakness – Is one arm weak or numb? Ask the person to raise both arms. Does one arm drift downward?

**S**peech Difficulty – Is speech slurred? Is the person unable to speak or hard to understand? Ask the person to repeat a simple sentence, like "The sky is blue." Is the sentence repeated correctly?

**T**ime to call 9-1-1 – If someone shows any of these symptoms, even if the symptoms go away, call 9-1-1 and get the person to the hospital immediately. Check the time so you'll know when the first symptoms appeared.

## Signs of A Stroke

### Beyond F.A.S.T. – Other Symptoms

Sudden **NUMBNESS** or weakness of face, arm, or leg, especially on one side of the body

Sudden **CONFUSION**, trouble speaking or understanding speech

Sudden **TROUBLE SEEING** in one or both eyes

Sudden **TROUBLE WALKING**, dizziness, loss of balance or coordination

Sudden **SEVERE HEADACHE** with no known cause



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## ABCs of Diabetes

- ▶ **A**1c less than 7% (avg 3 month BG)
  - ▶ Pre-meal BG 80-130
  - ▶ Post meal BG <180
- ▶ **B**lood Pressure < 140/90
- ▶ **C**ardiovascular risk reduction
  - ▶ Eval if statin therapy indicated



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## Microvascular Complications

▶ "Every time you see your doctor, take off your shoes and socks and show your feet!"



For patients with loss of protective sensation, foot deformities, or a history of foot ulcers

▶ Comprehensive foot eval each year to identify risk & promote prevention



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## Mr. Jones - What are Your Recommendations?

### Patient Profile

64 yr old with type 2 for 11 yrs. Hx of CVD.

### Labs:

- ▶ A1c 9.3%
- ▶ HDL 37 mg/dl
- ▶ Triglyceride 260mg/dl
- ▶ Proteinuria - neg
- ▶ B/P 152/94

### Self-Care Skills

- ▶ Walks dog around block 3 x's a week
- ▶ Bowls every Friday
- ▶ 3 beers daily
- ▶ *What meds?*
- ▶ *What referrals?*
- ▶ *My foot hurts*



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## LR Life Study

- ▶ Diabetes Type 2 for 8 years
- ▶ On glyburide for 8 years
- ▶ A1c 8.7%
- ▶ Doesn't know how to check blood glucose
- ▶ Smokes pack per day
- ▶ Has calluses on his feet that he trims with a razor



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## Diabetes and Amputations

- ▶ Diabetes = 8 fold risk of amputations
- ▶ Highest rate in those over 75
- ▶ 50% of amputations can be avoided through self-care skill education and early intervention
- ▶ Rate declined by 65% from 1996-2008
  - ▶ From 11.2 per 1000 to 3.9 per 1000

Stats from CDC 2012



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## Lower Extremities

- ▶ Lift the Sheets and Look at the Feet



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## Peripheral Vascular Disease – Venous Disease

- ▶ On exam
  - ▶ Skin brownish, reddish, mottled
  - ▶ Skin warm to touch, may be edematous
  - ▶ May have stasis ulcers on lower leg
  - ▶ Pulses difficult to locate due to edema
- ▶ Treatment
  - ▶ Support hose
  - ▶ Elevate feet
  - ▶ Avoid constriction
  - ▶ Shoes that can accommodate feet



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## Peripheral Arterial Disease (PAD)



- ▶ Affects 30% of people w/ dm over age 50
- ▶ Inadequate blood & oxygen to lower extremities
- ▶ Signifies ↑ risk of stroke, HTN, sudden death
- ▶ Pain w/ walking, relieved by rest “intermittent claudication”
- ▶ Pt c/o pain, cramping in calves, thighs, buttocks
- ▶ PAD + Neuropathy = increased amputation risk

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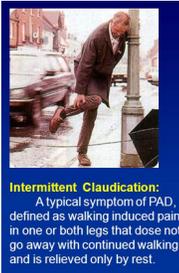
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## Peripheral Arterial Disease Intermittent Claudication

- ▶ Physical Exam – Skin
  - ▶ Pale or blue, purple
  - ▶ Dependent rubor, blanching when elevated
  - ▶ Cool to touch, loss of hair, nonhealing wounds, gangrenous
- ▶ Diminished pulses
- ▶ Treatment = Protect feet
  - ▶ Avoid constriction, increase walking, stop smoking, medications and/or surgery



**Intermittent Claudication:**  
A typical symptom of PAD, defined as walking induced pain in one or both legs that does not go away with continued walking and is relieved only by rest.

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## Foot Care Standards ADA

- ▶ Provide foot care education to pts w/ diabetes
- ▶ High risk pts – use multidisciplinary approach
  - ▶ Wound specialist, Vascular specialist, Podiatrist etc.
- ▶ Refer to foot care specialists for lifelong surveillance if:
  - ▶ smoke, loss of protective sensation, structural abnormalities, hx of lower extremity complications
- ▶ Initial screen for PAD includes:
  - ▶ Assess for intermittent claudication and pedal pulses.
  - ▶ Refer high risk pts for further vascular assess and consider exercise, meds, surgical options.



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## Profile of a High Risk Foot ADA

- ▶ Previous amputation
- ▶ Previous foot ulcer history
- ▶ Peripheral neuropathy
- ▶ Foot deformity
- ▶ Peripheral vascular disease
- ▶ Vision impairment
- ▶ Diabetic neuropathy (esp if on dialysis)
- ▶ Poor glycemetic control
- ▶ Cigarette smoking



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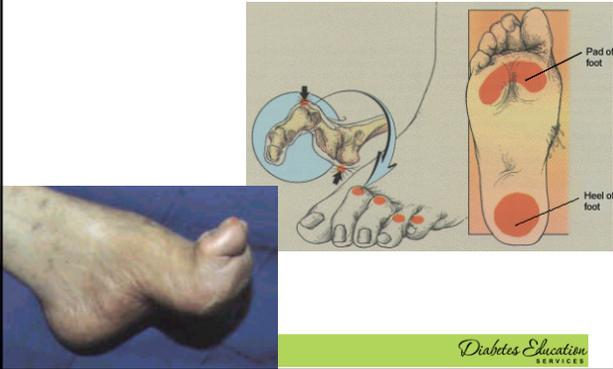
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## Foot Deformities



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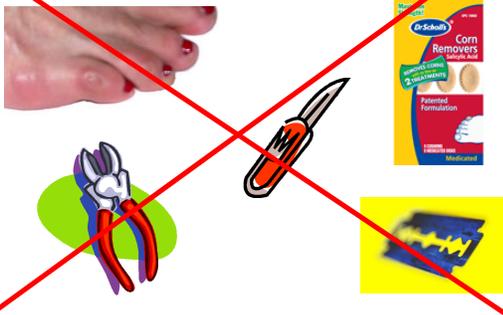
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## No Bathroom Surgery



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## You Can Make A Difference

### Assess

- ▶ Nail condition, nail care, in between the toes
- ▶ Who trims your nails
- ▶ Have you ever cut your self?
- ▶ Shoes – type and how often
- ▶ Socks
- ▶ Skin/skin care and vascular health
- ▶ Ability to inspect
- ▶ Loss of protective sensation



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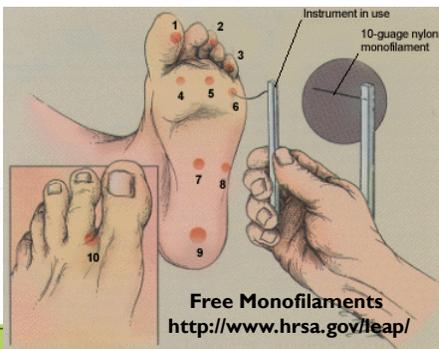
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## 5.07 monofilament delivers 10gms linear pressure



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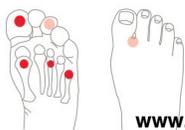
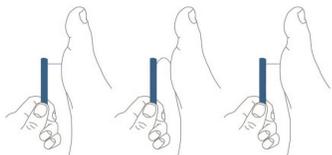
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## 5.07 monofilament delivers 10gms linear pressure



10 Free Monofilaments  
[www.hrsa.gov/hansensdisease/leap/](http://www.hrsa.gov/hansensdisease/leap/)



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## Three Most Important Foot Care Tips



- ▶ Inspect and apply lotion to your feet every night before you go to bed.
- ▶ Do NOT go barefoot, even in your house. Always wear shoes!
- ▶ Every time you see your doctor, take off your shoes and show your feet. Report any foot problems right away!

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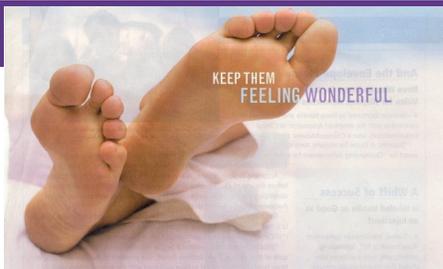
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### Medicare Pays for Therapeutic Shoes

Under the Therapeutic Shoe Bill, Medicare patients with diabetes are entitled to one pair of shoes and three pairs of orthotic inserts. You are entitled to this benefit every calendar year. We call your doctor and take care of the paperwork too. Our Certified Podiatrists come to your home to ensure a proper fit. All sizes available and many selections to choose from. Call today to get your shoes. Deductible or co-payments may apply. Sorry, no HMO's. Ohio, Pennsylvania, Western New York, Florida and More.

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## Fight Back Against Vessel Disease

- ▶ Lifestyle changes
  - ▶ 5 – 7% body weight loss
  - ▶ 30 minutes activity daily + strengthening
  - ▶ Check your feet
- ▶ Medications
  - ▶ Statins
  - ▶ B/P - ACE, ARBs, CCBs, diuretics
  - ▶ Aspirin, anti clotting agents
  - ▶ BG Meds – Metformin
  - ▶ Quit Smoking



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## Thank You



Please contact us if you have any questions!  
We are here to help!  
530 / 893-8635  
bev@diabetesed.net



► [www.DiabetesEd.net](http://www.DiabetesEd.net)



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